Memorandum

To: *Stephanie Vaughn (USEPA)*
Elizabeth Buckrucker (USACE)

From: *Sharon Budney (CDM)*
George Molnar (CDM)

Date: *July 2, 2010*

Re: *Status Report (May 19 to 25, 2010)*
CPG Oversight of Physical Water Column Monitoring
Lower Passaic River Restoration Project

On behalf of the United States Environmental Protection Agency (EPA) and the United States Army Corps of Engineers (USACE), Kansas City District, CDM Federal Programs Corporation (CDM) is providing oversight of the Cooperating Parties Group (CPG) remedial investigation/feasibility study (RI/FS) field activities associated with physical water column monitoring (PWCM), and the collection of physical data in the Lower Passaic River (LPR).

CDM oversight activities were conducted May 19 through May 25, 2010. Oversight included the observation of instrument maintenance, and collection of samples in the LPR in support of the CPG PWCM study. In addition, CDM collected split samples at select locations. All activities were conducted in accordance with the CPG *Quality Assurance Project Plan (QAPP)/Field Sampling Plan Addendum, Remedial Investigation Water Column Monitoring/Physical Data Collection for the Lower Passaic River, Newark Bay and Wet Weather Monitoring, Lower Passaic River Restoration Project*, Revision 4, March 2010.

Photographs of field activities can be found in Attachment 1. Copies of the logbook notes can be found in Attachment 2.

Instrument Maintenance at Locations below Dundee Dam (May 19 and 20, 2010)
The following summarizes oversight observations of instrument maintenance conducted May 19 and 20, 2010 at river miles (RM) 1.4, 4.2, 6.7, 10.2, and 13.5.

Prior to retrieving moored instruments for their monthly maintenance check, CPG contractor Ocean Surveys Incorporated (OSI) lowered a conductivity, temperature, and depth/optical backscatter (CTD/OBS) meter next the instruments to obtain a profile of real-time measurements through the water column. Afterwards, surface water samples for suspended solids concentration (SSC) were collected three feet above river bottom, and three below river surface via pump mounted to the CTD/OBS meter. Samples were collected by CPG contractor AECOM . During sample collection, real-time readings were measured by the CTD/OBS meter. This was repeated at all locations.

Once the SSC samples were collected, all instrumentation was pulled, cleaned, and inspected for damage. Batteries were checked and replaced if needed, and data were downloaded. All instruments pulled were functioning fine and required no replacement or re-calibration. After servicing, instrument arrays were reassembled and re-deployed within the same area as they were pulled.

After all instruments were re-deployed, crews waited approximately 9 minutes to allow any suspended sediments stirred up during re-deployment to settle or be swept away. Afterwards, surface water samples for SSC were collected three feet above river bottom, and three feet below river surface. Prior to sample collection, a CTD/OBS meter was lowered to obtain a profile of real-time measurements through the water column adjacent to the meters. Real-time readings were also measured during sampling via pump and tubing which were attached to the CTD/OBS meter.

Coordinates of instruments and water depths at re-deployment are as follow:

- RM 1.4: Northing: 691235.06/Easting: 597998.33; Depth: 16 feet
- RM 4.2: Northing: 692307.70/Easting 588236.33; Depth: 18.5 feet
- RM 6.7: Northing: 702830.35/Easting: 586139.53; Depth: 15 feet
- RM 10.2: Northing: 719749.85/Easting 592105.97; Depth: 18 feet
- RM 13.5: Northing: 734297.2/Easting: 597209.1; Depth: 14 feet

OSI replaced the water pump tubing to a thicker 1-inch ribbed tubing to avoid kinking. Use of this new tubing had no effect on samples, and did not deviate from methods/specifications detailed in CPG's QAPP.

Boat-Based Transect Survey at Locations below Dundee Dam (May 24, 2010)

The following summarizes oversight observations of acoustic Doppler current profile (ADCP) transect surveys and the collection of surface water samples at locations below Dundee Dam.

CDM oversight staff observed boat-based ADCP transect surveys at RMs 1.4, 4.2, 6.7, 10.2, and 13.5. Transect surveys were conducted during ebb and flood tides. Each survey was conducted in the area of three predetermined locations (P1 through P3) moving across the river channel. Once each survey was finished, crews lowered a CTD/OBS meter to obtain a profile of real-time measurements through the water column. This was conducted at each location followed by the collection of surface water from three feet below river surface, and three feet above river bottom via pump and tubing mounted to the instrument. Samples were collected for SSC, DOC, and POC analysis from locations collocated with moored instruments, and from locations furthest away. These locations consisted of P1 and P3 at every RM. No samples were collected for DOC and POC analysis at location P2 at any RM.

During the previous maintenance sampling event, CDM oversight staff observed that some pre-labeled CPG bottles were filled at the incorrect location by the AECOM representative. This was nearly repeated at other locations. CDM corrected AECOM and the correct bottles

were filled for their corresponding RM locations. During this sampling event, no such errors were observed.

CDM oversight staff collected split samples during the ebb tide transect survey from both depths at locations collocated with moored instruments. Samples were collected for SSC, DOC, and POC analysis, and were collected at the same time as those collected by AECOM via "Y" junction at the end of tubing which was connected to the pump. Split samples and corresponding CPG samples are presented in Table 1. Split samples were delivered via hand courier to the EPA Division of Environmental Science and Assessment (DESA) laboratory for analysis. Copies of CDM's signed chain of custodies can be found in Attachment 3.

Instrument Maintenance and Boat-Based Transect Survey above Dundee Dam (May 25, 2010)

The following summarizes oversight observations of OBS meter maintenance, the ADCP transect survey, and collection of surface water samples above Dundee Dam (RM 17.5). Per the CPG QAPP, only an OBS meter is deployed at this location which is affixed to a buoy suspending it three feet below river surface.

Prior to pulling the OBS meter for maintenance, OSI lowered a CTD/OBS meter to obtain a profile of real-time measurements through the water column adjacent to the location of the buoy-mounted OBS meter. Following the cast, the meter was lowered again and samples were collected three feet below river surface, and three feet above river bottom while the meter was recording data. Samples were collected by AECOM for SSC analysis.

After sampling, the OBS meter was pulled, cleaned, and inspected, and data were downloaded. The OBS meter was functioning fine and did not require any re-calibration, and was redeployed in the correct location. A second set of SSC samples and concurrent real-time CTD/OBS readings were collected. The coordinates of the buoy-mounted OBS meter and water depth are as follow:

- RM 17.5: Northing: 747517.4/Easting 594476.1; Depth: 9 feet

Following post-maintenance/re-deployment sampling, OSI conducted a boat-based ADCP transect survey. After the survey, a CTD/OBS meter was lowed at each of four predetermined locations (P1 through P4) along the transect line to obtain a profile of real-time measurements through the water column. Following the CTD/OBS cast at each location, AECOM collected samples from three feet below river surface. At the location of the buoy-mounted OBS meter, samples were collected three feet below river surface and three feet above river bottom. All samples were analyzed for SSC, DOC, and POC. CTD/OBS measurements were recorded in real-time during sampling activities.

CDM oversight staff collected split samples from both depths for SSC, DOC, and POC analysis at Location P2. Samples were collected at the same time as those collected by AECOM via "Y" junction at the end of tubing which was connected to the pump. Split samples and corresponding CPG samples are presented in Table 1. Split samples were delivered via hand courier to the EPA DESA laboratory for analysis. Copies of CDM's signed chain of custodies can be found in Attachment 3.

Table 1
Cooperating Parties Group and CDM Split Sample Identification
May 2010 Physical Water Column Monitoring Oversight
Lower Passaic River Restoration Project
Lower Passaic River, New Jersey

River Mile	Mooring Location	CPG Sample ID	CDM Split Sample ID	QC Samples	Tide Event	Collection Date	Analysis
1.4	P3	10A-E12-T014-P3-AS	10A-E12-T014-P3-AS-C		ebb	5/24/2010	SSC, DOC, POC
		10A-E12-T014-P3-BS	10A-E12-T014-P3-BS-C		ebb	5/24/2010	SSC, DOC, POC
4.2	P1	10A-E12-T042-P1-AS	10A-E12-T042-P1-AS-C		ebb	5/24/2010	SSC, DOC, POC
		10A-E12-T042-P1-BS	10A-E12-T042-P1-BS-C		ebb	5/24/2010	SSC, DOC, POC
6.7	P3	10A-E12-T067-P3-AS	10A-E12-T067-P3-AS-C		ebb	5/24/2010	SSC, DOC, POC
		10A-E12-T067-P3-BS	10A-E12-T067-P3-BS-C		ebb	5/24/2010	SSC, DOC, POC
10.2	P1	10A-E12-T102-P1-AS	10A-E12-T102-P1-AS-C		ebb	5/24/2010	SSC, DOC, POC
		10A-E12-T102-P1-BS	10A-E12-T102-P1-BS-C		ebb	5/24/2010	SSC, DOC, POC
13.5	P3	10A-E12-T135-P3-AS	10A-E12-T135-P3-AS-C		ebb	5/24/2010	SSC, DOC, POC
		10A-E12-T135-P3-BS	10A-E12-T135-P3-BS-C		ebb	5/24/2010	SSC, DOC, POC
17.5*	P2	10A-E11-T175-P2-AS	10A-E11-T175-P2-AS-C	MS **	NA	5/25/2010	SSC, DOC, POC
			10A-E11-T175-P2-AS-X	Duplicate ***	NA	5/25/2010	SSC, DOC, POC
		10A-E11-T175-P2-BS	10A-E11-T175-P2-BS-C		NA	5/25/2010	SSC, DOC, POC

CPG - Cooperating Parties Group
ID - identification
QC - quality control
SSC- suspended solids concentration
DOC - dissolved organic carbon
POC - particulate organic carbon
MS - matrix spike
NA - not applicable; location above head of tide
* - location above Dundee Dam
** - MS only for DOC analysis
*** - field duplicate sample of CDM split sample 10A-E11-T175-P2-AS-C denoted with the prefix "X"

CPG samples and CDM split samples are identified by Program-Event-Transect-Station-Depth-Type; split samples are followed by the prefix "C"
Where:
Program - Two-digit year plus "A" identifying the Spring 2010 Passaic River sampling program
Event - "E" plus two digit sequence number for sampling event
Transect - "T" plus three-digit representation of river miles by tenths. For example, T042 indicates river mile 4.2
Station - "P" plus single-digit sequence for position along transect moving from left bank. For example, "P2" for second location.
Depth - Single character sequence letter for depth interval. "A" for depth interval nearest river surface (i.e., three feet below surface); "B" for intervals of increasing depth (i.e., three feet above river bottom)
Type - Single character for sample type: "S" for normal sample

Attachment 1
Photographs of Physical Water Column Monitoring Activities

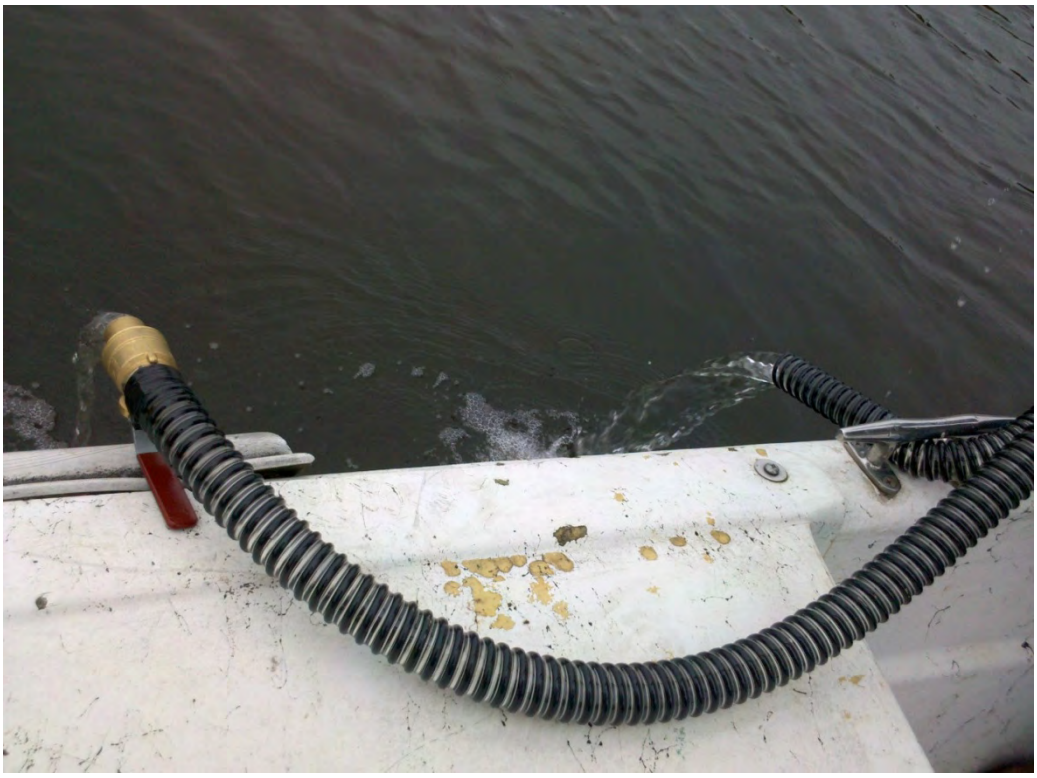

Photo 1. Effluent end of "Y" junction in new tubing used for split sample collection.

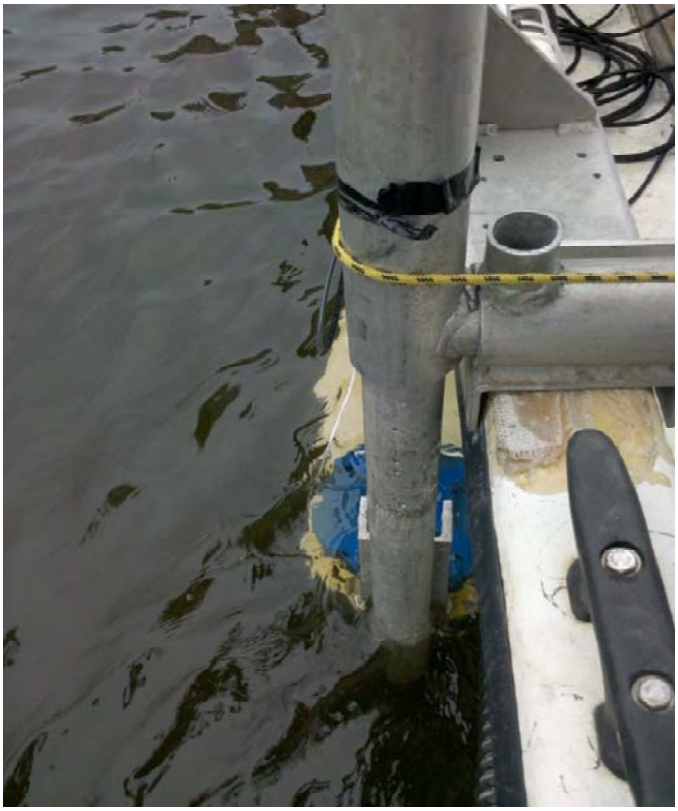

Photo 2. ADCP unit deployed during transect survey.

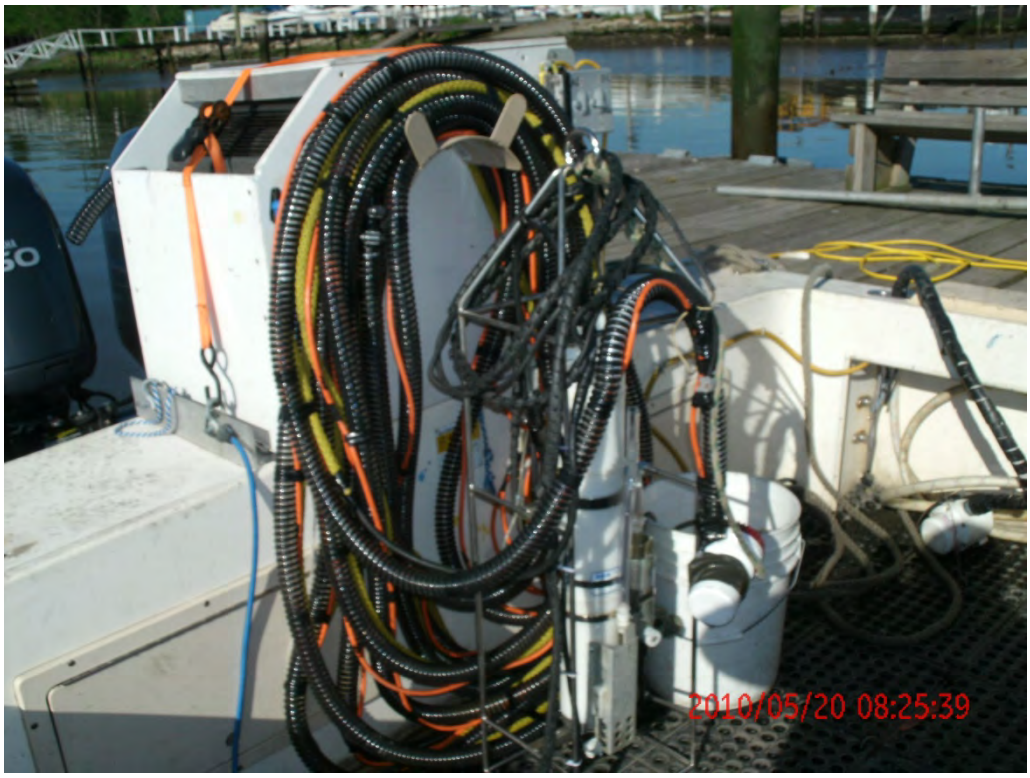

Photo 3. CTD/OBS meter along with tubing and pump used for sampling.

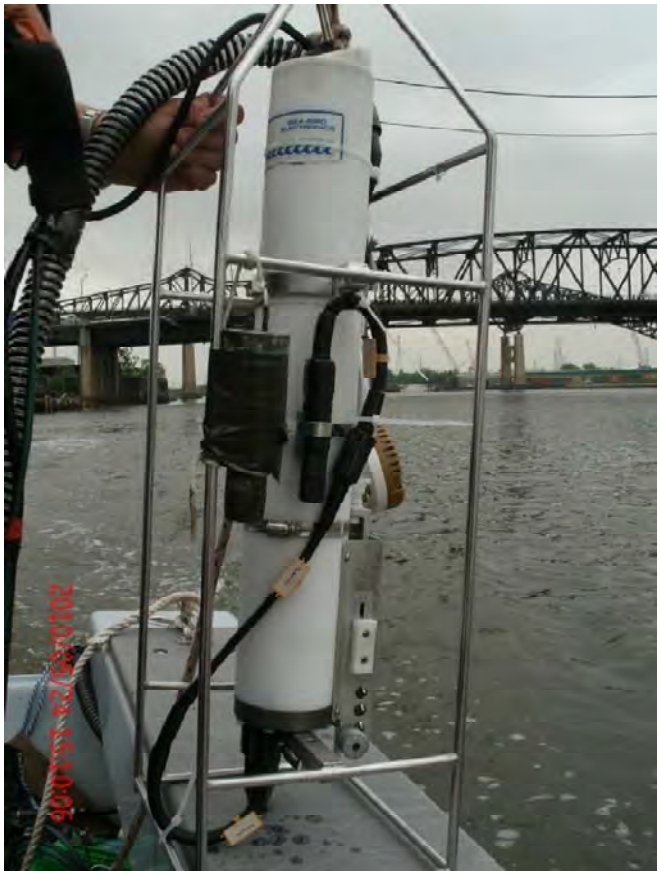

Photo 4. CTD/OBS meter being deployed.

Photo 5. ADCD/OBS/TCD mooring array housing. Instruments are removed for servicing.

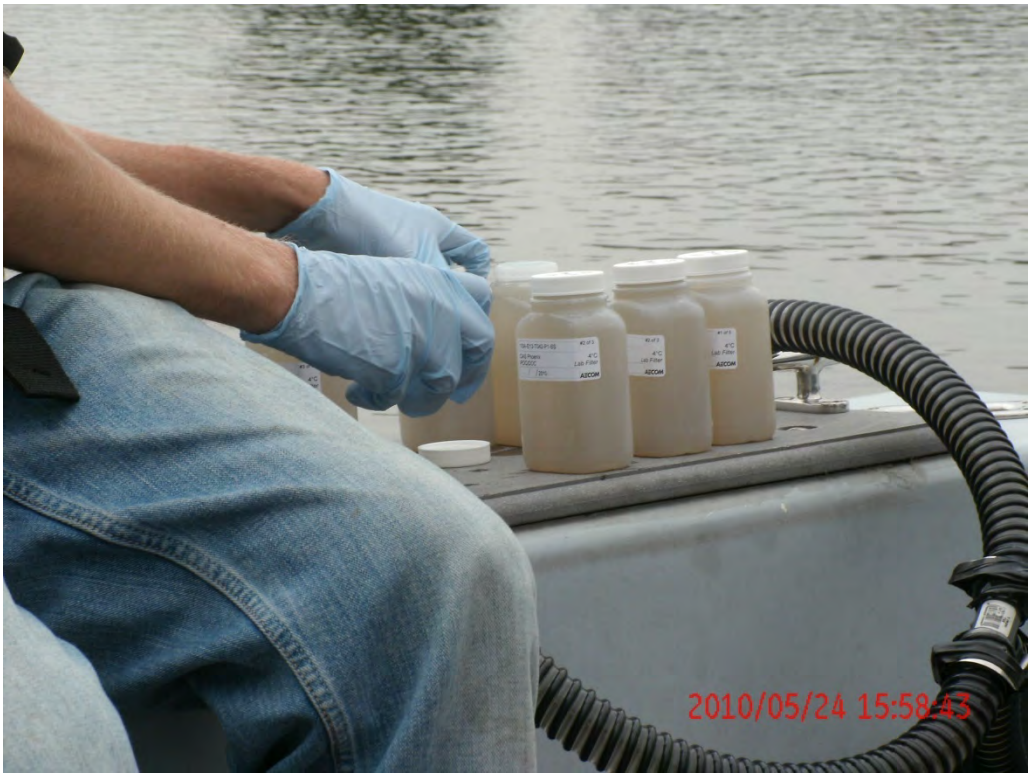

Photo 6. AECOM representative labeling bottles.

Attachment 2
Copies of Oversight Field Logbook Notes

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River

USACE

08:10 → SO arrives at Passaic Yacht Club

08:15 → SO signs in as Jon Walker gives health & safety meeting.

Weather → Cloudy ~ 65°F

PPE → Level D Modified

08:20 → Depart from yacht club to drive up to RM 13.5

09:05 → Arrive at RM 13.5 by CPG Field Facility and dock boat. ASI begins setting up winch on side of boat. Jon Walker gets bottleware together. SO confirms

10:07 → ASI drives to location RM 13.5 and gets ready to lower CTD into water.

10:08 → ASI lowers CTD at location E10T13S-P3 BS

10:11 → Jon Walker collects sample from 3' above

SO 5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River
USACE

river bottom labeled E10-T13S-P3-BS

10:12 → Jon Walter collects sample from 3' below river surface labeled E10T13S-P3-AS

10:20 → ASI pulls up bottom mounted mooring. Bottom mooring measures the currents and acts as a ADCP (acoustic doppler current profiler). ASI proceeds to dock at CPG facility to transfer/download data and inspect all equipment. All data looks good and equipment is cleaned and will be ready for redeployment.

11:24 → Move from dock to RM 13.5 and remove surface mooring YSI. ASI will download data and check to see if results look good. ASI will clean YSI and unit will be ready to be redeployed.

5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River
USACE

11:55 → After cleaning surface YSI, ASI redeploys it.

12:07 → ASI re-deploys bottom-mounted mooring. The new coordinates for bottom is:

N → 734297.20
E → 597209.10

12:12 → Jon Walter gets bottleware together to collect samples after re-deploying/checking instruments.

12:16 → Jon Walter collects sample from 3' above river bottom. Sample name is E14-T13S-P3-BS

12:18 → Jon Walter collects sample from 3' below river surface. Sample name is E14-T13S-P3-AS. AECOM collects a duplicate at top location and sample name is E14-T13S-P3-AT.

* Note: The CTD was lowered to desired depths

5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River

USACE

to collect samples at RM 13.5

12:20 → After collecting sample from RM 13.5, Jon Walker places them into a cooler w/ ice and proceeds down river to RM 10.2

12:45 → ASI takes a water level measurement near De Jessa Bridge.

12:48 → ASI approaches RM 10.2 and lowers CTD approximately 3' above river bottom

12:52 → Jon Walker collects sample E10-T102-P1-BS from 3' above river bottom

12:53 → Collect sample for E10-T102-P1-AS

*Note: The CTD is made by SeaBoss Electronics from Bellvue, Washington. AS CTD is lowered to desired depths and pump is turned on so AECOM can collect their sample, ASI

5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River

USACE

is able to record readings like conductivity, temperature, depth & turbidity.

13:00 → ASI is able to locate bottom mounted mooring and begin lifting it up to river surface. Once surfacing ASI washes off bottom-mounted mooring.

13:10 → ASI breaks down bottom mounted mooring and begins to clean off equipment / download data.

13:50 → ASI pull out surface mooring YSI and clean off instrument. ASI will download data.

14:20 → ASI re-deploys surface mooring YSI

14:30 → ASI re-deploys bottom-mounted mooring with YSI and ADCP attached @ RM 10.2. The coordinates for the bottom mounted

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River

USACE

mooring are:

N → 719749.85

E → 592105.97

14:38 → AECOM collects sample from 3' above river bottom at E14-T102-P1-BS.

14:40 → AECOM collects sample from 3' below river surface at E14-T102-P1-AS.

14:43 → After AECOM collects samples, OSI continues to move to next location at RM6.7.

14:50 → OSI takes a measurement of the water depth

15:20 → OSI lowers CTD into water and raises it to 3' above river bottom.

15:23 → AECOM collects E10-T067-P3-BS

15:24 → AECOM collects sample at E10-T067-P3-AS which is taken from the pump attached to the CTD

SO 5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River

USACE

located 3' below water surface.

15:25 → OSI raises CTD out of water and puts into boat.

15:33 → OSI raises bottom mounted mooring into boat and begins cleaning off instrument before downloading data. OSI replaces batteries in the YSI and ADCP.

16:03 → OSI removes surface mounted mooring YSI. After YSI is completely cleaned off, OSI downloads data. Once the wipers go off on both YSI units and ADCP pings (actions verifying units are operating), OSI will re-deploy units.

16:40 → OSI re-deploys surface mooring YSI unit.

16:43 → OSI re-deploys bottom mounted mooring. The coordinates are: N → 722832.35 E → 586139.53; OSI

SO 5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River USACE

places CTD in position so it is ready to go.

16:50 → OSI places CTD 3' above river bottom and pumps water to collect sample.

16:51 → AECOM collects sample E14-T067-P3-BS. After AECOM collects sample, OSI raises CTD to 3' below water surface and pumps water

16:53 → AECOM collects sample E14-T067-P3-AS.

16:55 → OSI pulls up CTD and puts away equipment before driving back to Passaic Yacht Club.

17:25 → Arrive back at Passaic Yacht Club. OSI ties off at dock. Dustin Koch informs SO that boat will be leaving at 8AM tomorrow morning from the Yacht Club. SO will inform Jeff Rakowski.

→ SO ← 5/19/10

Location Lower Passaic Date 5/19/10

Project / Client Lower Passaic River USACE

of meeting time.

17:35 → SO leaves Yacht Club en route back to office to drop off log book.

SO 5/19/10

→ SO ← 5/19/10

Location Lower Passaic Date 5/24/10

Project / Client Lower Passaic River

USACE E-12 RM-13.5, 10.2

6[30]- Mel Koberle (MK) CDM onsite
OSI: Jay Delorenzo & Dustin Kach
AECOM: Jim Alderson
PPE: Level D mod w/ life jacket 5/24/10
Crew mobilizing for the day
7[00] Launch boat heading to RM 13.5
7[10] Topographic scan of RM 13.5
7[25] -AECOM Collect 10A-E12-T135-P1-BS
Time: 1126 and -AS at Time: 1127
7[33] AECOM collect 10A-E12-T135-P2-BS
Time: 11[33] and -AS at Time: 11[34]
7[40] AECOM collect 10A-E12-T135-P3 BS
Time: 11[40] and AS at Time: 1143
CDM split sample at P3: 10A-E12-T135-P3-BS-C
at Time: 7[40] and 10A-E12-T135-P3-AS-C Time: 743
745 Heading to RM 10.2 — mel 5.24.10
758 At RM 10.2 - perform topographic scan
826 AECOM Collect 10A-E12-T102-P1-BS
Time: 1226 -AS Time: 1228
CDM split sample ~~at P1:~~ 10A-E12-T102-P1-BS-C
Time: 826 and 10A-E12-T102-P1-AS-C Time: 828
834 AECOM collect 10A-E12-T102-P2-BS
Time: 1234 -AS Time: 1236
Mel 5/24/10

Location Lower Passaic Date 5/24/10

Project / Client Lower Passaic River

USACE RM-10.2, 6.7 E-12

841 AECOM collect 10A-E12-T102-P3-BS
at Time: 1241 -AS Time: 1243
846 Heading to RM 6.7 5.24.10
9[02] At RM 6.7 - topographic scan
9[19] AECOM collect 10A-E12-T067-P1-BS
at Time: 13[19] -AS at Time: 1321
927 AECOM collect 10A-E12-T067-P2-BS
at Time: 1327 -AS at Time: 1328
9[31] AECOM collect 10A-E12-T067-P3-BS
at Time: 13[31] -AS at Time: 1332
CDM collect split sample at P3: 10A-E12-T067-P3-BS-C Time: 931 and 10A-E12-T067-P3-AS-C Time: 932
Note: AECOM collected a duplicate at
10A-E12-T067-P2-BS called it BT
same time as parent sample 5/24/10
945 Heading back to CPG facility
1018 Back at CPG facility 5.24.10
10[30] Hand samples to Sharon Budney
(CDM) and drop off QAPP, HASP, & Field
Forms for Dean EPA at CPG facility
11[00] MelK offsite - Lunch - Crew mob
for ~~flood tide Sa~~ E-13 Sampling
MelK 5/24/10

Location Lower Passaic Date 5/24/10
Project / Client Lower Passaic River
USACE RM 13.5.

CDM Split Sample Summary

Sample ID	Time
~~10A-T135~~ melk 5/24/10	
10A-E12-T135-P3-BS-C	740
10A-E12-T135-P3-AS-C	743
10A-E12-T102-P1-BS-C	826
10A-E12-T102-P1-AS-C	828
10A-E12-T067-P3-BS-C	931
10A-E12-T067-P3-AS-C	932

melk 5/24/10

Note: left from CPG facility this morning. Dropped off nets, logbook & fish book for Dean-EPA. Logbook in plastic bag w/ custody seal. Also H&S meeting conducted this morning.
1300 MelK CDM and crew onsite - mobing
1320 Heading to RM 13.5 melk
1322 Doing Topographic scan of RM 13.5
1358 AECOM collect 10A-E13-T135-P1-BS at Time: 1758 - AS at Time: 1800
1406 AECOM collect 10A-E13-T135-P2-BS at Time: 1806 - AS at Time: 1807
1411 AECOM collect 10A-E13-T135-P3-BS at Time: 1811 - AS at Time: 1812
Note: Collect duplicate at 10A-E13-T135-P1-AS
melk 5/24/10

Location Lower Passaic Date 5/24/10
Project / Client Lower Passaic River
USACE RM 13.5, 10.2, 06.7

Called it - AT, Time: 1801 - m 5/24/10

Note: analyses: POC/DOC/SS w/ 0.7 and 0.5 um filters in (2) 1-Liter Ambers w/ ice only. Lab - DESA

1415 Heading to RM 10.2 melk 5/24/10
1430 At RM 10.2 - Topographic Survey
1444 AECOM collect 10A-E13-T102-P1-BS at Time: 1844 - AS at Time: 1846
1450 AECOM collect 10A-E13-T102-P2-BS at Time: 1850 - AS at Time: 1851
1454 AECOM collect 10A-E13-T102-P3-BS at Time: 1854 - AS at Time: 1856
Note: Duplicate collected at 10A-E13-T102-P1-AS called AT w/ Time: 1847
1500 Heading to RM 06.7 melk 5/24/10
1520 At RM 06.7 - Topographic Scan
1531 AECOM collect 10A-E13-T ~~102~~ 067 melk 5/24/10 - P1-BS at Time: 1931 - AS at Time: 1933
1537 AECOM collect 10A-E13-T067-P2-BS at Time: 1937 - AS at Time: 1937
1541 AECOM collect 10A-E13-T067-P3-BS at Time: 1941 - AS at Time: 1943
melk 5/24/10

Location Lower Passaic Date 5/24/10

Project / Client Lower Passaic River
USACE

1545- Completed sampling for the day - heading back to CPG Facility
1624 Back at CPG facility - demob
1645 Mel Koberle (mK) offsite

mK
5/24/10

Location Lower Passaic River Date 5/25/10

Project / Client Dundee Dam
USACE

945- Mel Koberle (mK) CDM onsite
AECOM: John Walker OSI: Jay Delorenzo & Dustin Kach onsite
PPE: Level D mod w/ life jacket
AECOM performed H&S meetings
Weather: 80° F, sunny, warm
Crew mobilizing for the day
1000 Boat launched to Rm 17.5
1028 Arrive at Dundee Dam transect
1034 At P2 location - AECOM going to collect pre-service sample: 10A-E10-T175-P2-AS Time: 1435 and -BS Time: 1454
1036- Pulled up YSI at P2 buoy location
1120 All data was downloaded - looks good. Now running topographic scan on transect
1140 AECOM collect 10A-E11-T175-P2-AS at Time: 1540 mK
1143 AECOM collect 10A-E11-T175-P2-AS at Time: 1545-BS Time: 1543
~~5/26/10~~ 5/25/10 CDM collect split sample 10A-E11-T175-PC-AS-C Time 1145 MS/D at DOC. Duplicate AS-X and 10A-E11-T175-P2-BS-C Time: 1143
mK 5/27/10

Location: Lower Passaic River Date: 5.25.10
Project/Client: Dundee Dam
USACE

1149 AECOM collect 10A-E11-T175-P3-AS
Time: 1549 mell
1152 AECOM collect 10A-E11-T175-P4-AS
Time: 1552 mell

CDM Sample Summary

Sample ID	Time	QA/QC
10A-E11-T175-P2-BS-C	1143	
10A-E11-T175-P2-AS-C	1145	MS/D DOC
10A-E11-T175-P2-AS-X	1145	Duplicate

1200 Heading back to launch area
1215 Back at docking area - demob
MK offsite - to warehouse mell

mell
5/25/10

J.R 5/20/10

Location ~~East~~ Rut LPR yacht Date 5-20-10 13

Project / Client LPRSA Club / USACE

J. Rhoads

Weather: 60° farenheit
PPE: Modified Level D
Personnel: JR (COM), JW (AECOM), SB and DK (OSI)
0735 JR and JW onsite awaiting OSI arrival.
0745 OSI arrives onsite
0800 COM, OSI, and AECOM board boat.
0820 Boat depart yacht club
0830 OSI arrives at Survey point in order to calculate water level. Survey point is located at first bridge past buoy.
0850 OSI arrives at buoy at 1.4 river mile.
Sample time for
0855 E10-T014-P3-BS
0857 " " AS
0857 " " ATCAS duplicate
BS Sample collected 3' from bottom at 10.5' below water surface.

J.R 5-20-10

Location LARSA Date 5-20-10

Project / Client USACE

J. Rukowski

0930 ADCP and VSI pulled to surface, SB starts to wash off equipment.

0935 OSI Starts to download data.

1020 Download of equipment complete

1035 OSI places ADCP back in water

X 597995.33 Y 691235.06 ADCP coordinates River Mile 1.4

1042 E14-T014-P3-BS Sample time

1044 " " -AS Sample time

1052 OSI arrives at 4.2 river mile survey point in order to find water level

↑ Sample time for E14-
1112 T042-P1-BS

↑ Sample time for E14-
1113 T042-P1-AS

1120 OSI pulls up ADCP and starts to clean

4.2 5-20-10

Location LPRSA Date 5-20-10

Project / Client USACE

J. Rukowski

platform.

1125 OSI starts to download data.

1150 - V2 6260 is pulled from below buoy in order to download data.

* Note water depths today have ranged from 14-52 ft.

1230 OSI places ADCP back into water.

ADCP X 588236.33 Y 691230.76 Coordinates River Mile 4.2

1210 E14-T042-P1-BS sample time

E14-T042-P1-AS Sample
1241 time

* Note COM did not accept split samples today. Samples were collected by AECOM.

1305 RV Ready I arrives back at dock

1310 QA of AECOM collects a field blank is collected

4.2 5-20-10

16

Location LPRSA Date 5-20-10

Project / Client USACE

J. Rebuck

by Pouring distilled water into a 5 gallon bucket and placing pump in bucket. Pump is turned on which forces water through line. JW waited for water to flush out line then Sampled

1330 JR departs site.

J.R

5-20-10

Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Brutch

0545 Stefanie Brutch (SB) - CDM onsite. Weather: ~65°F, Overcast, Slight breeze. PPE: mod-level D. SB onsite waiting.

0550 Aecom + OSI arrive on site. Louis Berger already onsite.

0600 Aecom + OSI loading boat for sampling ~~Debrief~~

Profile samples will be taken from 3' under surface river + 3' above river bottom.

0645 Boat departs dock w/ Aecom, OSI + Louis Berger TO Newark Bay to collect 1 split sample. SB onshore waiting to sample until they return. CDM collects split samples in Passaic River at River Mile 1.4 + 4.2.

Stefanie J Brutch 05/24/10

Location LPRSA Date 05/24/2010
Project / Client USACE
~~Stefanie J. Britch~~

0800 Boat back at dock. Crew on boat is Ryan + Steve (OSI) + Mike Hauser (Aecom)
0806 Boat leave dock
0813 arrive at RM 1.4 - P1 to collect data
0840 sampling 10A - E12 - T014 - P1 - BS (Aecom only - CDM no split) OSI puts sampling apparatus in water 3' above bottom (a.b). Aecom sampled POC/DOC than SSC.
0842 Aecom sampling 10A - E12 - T014 - P1 - AS same technique. Sampling apparatus is 3' from top surface which is at 16.4' above bottom
0848 arrive at T014 - P2. OSI deploy sample apparatus to 3' above bottom. Black tubing comes off apparatus so sample can be taken.

SJB 05/24/2010

Location LPRSA Date 05/24/2010
Project / Client USACE
Stefanie J. Britch

Aecom samples E12 - T014 - P2 - BS.
0850 Aecom samples E12 - T014 - P2 - AS - 3' feet under surface surface is at 17.2.
0903 arrive at E12 - T014 - P3
CDM take split 10A - E12 - T014 - P3 - BS - C for SSC + POC/DOC (2 amber jars 1L)
0905 sampled (CDM + Aecom) 10A - E12 - T014 - P3 - AS - C for same as previous. Sample apparatus was deployed 3' above bottom + 3' below surface respectively. Surface was at ~~18.2~~ 18 a.b. SJB 05/24/10
~~0910~~ moving to RM 4.2.
0916 arrive at RM 4.2 to collect data of transect. (current meter)
* left is P1 + right P3 facing down stream.

SJB 05/24/2010

20 Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Britch

0934 Aecom + CDM Samples 10A-E12-T042-P1-BS-C for same as previous 3' above bottom

0936 sampled 10A-E12-T042-P1-AS-C for same as above. 3' below water surface.

~~Water~~ surface is ice. 6' above bott.

0938 at T042: P2. Aecom sampling only BS + AS same as previous. Surface water is 19.1' above bottom.

0950 at P3 sampling like previous AS + BS. Aecom sampling only. Surface water = 15.7' above bottom.

0956 left up current meter + head back to yacht club.

1025 back at yacht club. waiting until afternoon voyage.

SAB 05/24/2010

Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Britch

1055 Sharon Budney - CDM on site to pick up samples.

1100 Sharon off site.

1320 Aecom, OSI, Louis Berger left dock for second tide (flood) sampling. SB on shore until finished sampling Newark Bay like previous.

* CDM will not take any split samples during this event.

1430 boat at dock.

1435 boat leaving dock for RM 1.4.

1444 arrive at RM 1.4 to collect readings.

1457 put sampling apparatus to bottom + then bring up 3' from bottom. Aecom Sampling EB-T014-P1. DTB = 13'. Sampled for same as prev.

SAB 05/24/2010

Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Britch

sampled BS than AS.
1503 moving to E13-T014-P2 to sample.
1506 lowering sampler to bottom then will bring up 3' to collect BS ~~(SB52410)~~ sample dtb = 18'.
1508 bringing sampler to 3' below surface to collect AS sample
1509 moving to E13-T014-P3
1512 lower apparatus to bottom then will lift 3' above bottom to take BS sample w/dup. DTB = 18'.
1516 lifting apparatus to 3' below surface to collect AS sample. moving to RM 4.2
1525 at RM 4.2 taking readings.
1540 lowering sampler to bottom then will left to 3' above bottom. Aecom will take BS sample + dup.
SDB 05/24/2010

Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Britch

dtb = 18'
1545 lifting sampler to 3' below surface to take AS sample. This was E13-T0042-P1. Moving to P2.
1550 lowering sampling apparatus to bottom then left to 3' above bott to collect BS sample DTB = 21'. At P2 locs only collect SSC sampled. This is E13-T0042-P2
1553 lifting sampler to 3' below surface to Collect AS sample. Move to E13 T0042-P3.
1557 lowering sampler to bottom. Will then left to 3' above bottom to take BS sample. DTB = 19'.
1600 lifting sampler to 3' below surface to take AS sample
SDB 05/24/2010

24

Location LPRSA Date 05/24/2010

Project / Client USACE

Stefanie Butler

1602 finished sampling for day. Heading back to yacht club.

1921 arrive at yacht club. Cleaning up + putting things away. Putting sampler in DI water to collect field blank.

Stefanie Butler
05/24/2010

Attachment 3
Copies of Signed Chain of Custodies

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: R
Client No:

Region:	2	Date Shipped:	5/24/2010	**Chain of Custody Record**	Sampler Signature: Sharon Budney
Project Code:		Carrier Name:	Courier	Relinquished By (Date / Time)	Received By (Date / Time)
Account Code:		Airbill:		1 Sharon Budney 5/24/10 14:00	
CERCLIS ID:	NJD980528996	Shipped to:	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/N.			4	
Project Leader:	George Molnar				
Action:	Combined RI/FS				
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
10A-E12-T01 4-P3-AS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T014-P3-AS-C	S: 5/24/2010	9:05	--
10A-E12-T01 4-P3-BS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T014-P3-BS-C	S: 5/24/2010	9:03	--
10A-E12-T04 2-P1-AS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T042-P1-AS-C	S: 5/24/2010	9:36	--
10A-E12-T04 2-P1-BS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T042-P1-BS-C	S: 5/24/2010	9:34	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
Analysis Key:	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Shipment Iced? _____

D/POCSS0.7 = DOC POC Suspended Solids (0.7 um filt, SS (1.5) = Suspended Solids (1.5 um)

TR Number: 2--052410-01

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: R
Client No:

Region:	2	**Date Shipped:**	5/24/2010	**Chain of Custody Record**	**Sampler Signature:** Sharon Budney
Project Code:		**Carrier Name:**	Courier	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 Sharon Budney 5/24/10 14:00	
CERCLIS ID:	NJD980528996	**Shipped to:**	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/N.			4	
Project Leader:	George Molnar				
Action:	Combined RI/FS				
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		QC Type
10A-E12-T067-P3-AS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T067-P3-AS-C	S: 5/24/2010	9:32	--
10A-E12-T067-P3-BS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T067-P3-BS-C	S: 5/24/2010	9:31	--
10A-E12-T102-P1-AS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T102-P1-AS-C	S: 5/24/2010	8:28	--
10A-E12-T102-P1-BS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T102-P1-BS-C	S: 5/24/2010	8:26	--
10A-E12-T135-P3-AS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T135-P3-AS-C	S: 5/24/2010	7:43	--
10A-E12-T135-P3-BS-C	Surface Water/ Sharon Budney	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E12-T135-P3-BS-C	S: 5/24/2010	7:40	--

Shipment for Case Complete? N	**Sample(s) to be used for laboratory QC:**	**Additional Sampler Signature(s):**	**Chain of Custody Seal Number:**
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

D/POCSS0.7 = DOC POC Suspended Solids (0.7 um filt, SS (1.5) = Suspended Solids (1.5 um)

TR Number: 2--052410-02

REGION COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case: R
Client No:

Region:	2	**Date Shipped:**	5/25/2010	**Chain of Custody Record**	Sampler Signature: Stefanie Britch
Project Code:		**Carrier Name:**	Courier	**Relinquished By (Date / Time)**	**Received By (Date / Time)**
Account Code:		**Airbill:**		1 Stefanie Britch 05/25/10 1400	
CERCLIS ID:	NJD980528996	**Shipped to:**	DESA Laboratories/EPA 2890 Woodbridge Ave Bldg. 209 Edison NJ 08837 (732) 906-6886	2	
Spill ID:	96			3	
Site Name/State:	Lower Passaic River Restoration Project/NJ			4	
Project Leader:	George Molnar				
Action:	Combined RI/FS				
Sampling Co:	CDM				

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	QC Type
10A-E11-T17 5-P2-AS-C	Surface Water/ Stefanie Britch	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (3)	10A-E11-T175-P2-AS-C	S: 5/25/2010 11:45	--
10A-E11-T17 5-P2-AS-X	Surface Water/ Stefanie Britch	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E11-T175-P2-AS-X	S: 5/25/2010 11:45	Field Duplicate
10A-E11-T17 5-P2-BS-C	Surface Water/ Stefanie Britch	L/G	D/POCSS0.7 (21), SS (1.5) (21)	(Ice Only) (2)	10A-E11-T175-P2-BS-C	S: 5/25/2010 11:43	--

Shipment for Case Complete? N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Chain of Custody Seal Number:
	10A-E11-T175-P2-AS-C		
Analysis Key:	**Concentration:** L = Low, M = Low/Medium, H = High	**Type/Designate:** Composite = C, Grab = G	**Shipment Iced?** _____

D/POCSS0.7 = DOC POC Suspended Solids (0.7 um filt, SS (1.5) = Suspended Solids (1.5 um)

TR Number: 2-043013577-052510-0005

PR provides preliminary results. Requests for preliminary results will increase analytical costs.

Send Copy to: Sample Management Office, Attn: Heather Bauer, CSC, 15000 Conference Center Dr., Chantilly, VA 20151-3819; Phone 703/818-4200; Fax 703/818-4602